Appl. No. : 10/603,425 Filed : June 24, 2003

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph entitled "Field of the Invention" on page 1 as follows:

The present invention is directed to composite filters and methods for preparing same.

More specifically, it is directed to filter laminates of multiple disereet discrete layers of material bonded together, with at least one of the layers being an asymmetric membrane.

Please amend the paragraph beginning on line 20 of page 3 as follows:

In a first embodiment of the present invention, a filter laminate is provided including a plurality of discrete layers of material, each layer being adjacent at least one other layer, wherein at least one layer is an asymmetric membrane and at least one layer is a hot melt adhesive, the laminate including a bond between each of the adjacent layers, wherein the bond is formed after the formation of the material of the layers. The asymmetric membrane may have a first and a second surface, each of the surfaces including pores, wherein the pores of the second surface have an average diameter at least about 5 times greater than an average diameter of the pores of the first surface, more preferably 10 times greater. The asymmetric membrane may further include a support structure between the first surface and the second surface, wherein the support structure includes a reticular network of flow channels connecting the pores of the first surface with the pores of the second surface. The flow channels may generally increase gradually in diameter between the first surface and the second surface.

Please amend the paragraph beginning on line 17 of page 5 as follows:

In a second embodiment of the present invention, a filter laminate is provided including a plurality of discrete layers of material, each layer being adjacent at least one other layer, wherein at least one layer is an asymmetric membrane including polyvinylidene fluorides, polyamides, and cellulosic derivatives, the laminate including a bond between each of the adjacent layers, wherein the bond is formed after the formation of the material of the layers.

Appl. No.

10/603,425

Filed

June 24, 2003

Please amend the paragraph beginning on line 23 of page 5 as follows:

In a third embodiment of the present invention, a filter laminate is provided including a

plurality of discrete discrete layers of material, each layer being adjacent at least one other layer.

including at least a first asymmetric membrane as a layer, and a second membrane as a distinct

layer, the laminate including a bond between each of the adjacent layers, wherein the bond is

formed after the formation of the material of the layers.

Please amend the paragraph beginning on line 28 of page 5 as follows:

In a fourth embodiment of the present invention, a method of making a filter laminate is

provided, including the steps of providing a first plurality of discrete discrete layers of material;

contacting the layers to form a first stack, wherein each layer is adjacent at least one other layer in the stack; forming a bond between adjacent layers in the first stack, wherein the bond is

formed after the formation of the material of the layers, thereby forming a first laminated stack

layer; contacting the first laminated stack with a second layer of material; and forming a bond between the first laminated stack layer and the second layer, wherein the bond is formed after the

formation of the material of the layers, thereby forming a filter laminate.

Please amend the paragraph beginning on line 6 of page 6 as follows:

In another aspect, the second layer includes a plurality of discreet discrete layers, wherein

at least one of the discreet discrete layers includes an asymmetric membrane.

Please amend the paragraph beginning on line 20 of page 6 as follows:

In a fifth embodiment of the present invention, a method of making a filter laminate is

provided including the steps of providing a plurality of discrete discrete layers of material,

wherein at least one layer is an asymmetric membrane and at least one layer is a hot melt

-3-

Appl. No.

: 10/603,425

Filed

June 24, 2003

adhesive; contacting each layer with at least one other layer to form a stack including at least two layers; and forming a bond between adjacent layers, wherein the bond is formed after the formation of the material of the layers, thereby forming a filter laminate.

Please amend the paragraph beginning on line 27 of page 6 as follows:

In a sixth embodiment of the present invention, a method of making a filter laminate is provided including the steps of providing a plurality of discrete discrete layers of material, wherein at least one layer is an asymmetric membrane including polyvinylidene fluorides, polyamides, or cellulosic derivatives; contacting each layer with at least one other layer to form a stack including at least two layers; and forming a bond between adjacent layers, wherein the bond is formed after the formation of the material of the layers, thereby forming a filter laminate.

Please amend the paragraph beginning on line 3 of page 7 as follows:

In a seventh embodiment of the present invention, a method of making a filter laminate is provided including the steps of providing a plurality of discrete discrete layers of material, wherein at least one layer is an asymmetric membrane and wherein at least one layer including polypropylene, polyolefin, polyethylene, nylon, paper, cellulose, glass fiber, or acrylic; contacting each layer with at least one other layer to form a stack including at least two layers; and forming a bond between adjacent layers, wherein the bond is formed after the formation of the material of the layers, thereby forming a filter laminate.

Please amend the paragraph beginning on line 11 of page 7 as follows:

In an eighth embodiment of the present invention, a method of making a filter laminate is provided including the steps of providing a plurality of discrete discrete layers of material, wherein at least one layer is an asymmetric membrane and wherein at least one additional layer is a membrane; contacting each layer with at least one other layer to form a stack including at least

Appl. No. : 10/603,425 Filed : June 24, 2003

two layers; and forming a bond between adjacent layers, wherein the bond is formed after the formation of the material of the layers, thereby forming a filter laminate.

Please amend the paragraph beginning on line 18 of page 7 as follows:

In a ninth aspect of the present invention, a method for filtering ink is provided, the method including providing a filter laminate, the filter laminate including a plurality of diserect discrete layers of material, each layer being adjacent at least one other layer, wherein at least one layer is an asymmetric membrane, the laminate including a bond between each of the adjacent layers, wherein the bond is formed after the formation of the material of the layers; and passing an ink through the filter laminate, whereby the ink is filtered.

Please amend the paragraph beginning on line 19 of page 12 as follows:

The invention thus provides a filter laminate, with multiple disereet discrete layers of material, with each layer being adjacent and bonded to least one other layer. At least one of the layers is an asymmetric membrane. In contrast to laminates that have a membrane cast onto a support layer, in the present invention the bond between the layers is formed after the formation of the material of the layers. In a preferred embodiment, the asymmetric membrane is a highly asymmetric ultrafilter or microfilter. The average diameter of the large pores on the dull or open side of the membrane is at least about 5 times larger, preferably between 10 and 20,000 times larger, than the average diameter of the pores on the skin or shiny side of the membrane. The asymmetric membranes may be gradually asymmetric, wherein the flow channels between the skin surface and the opposite surface generally increase gradually in size. As an alternative, the membranes may have a mixed isotropic and anisotropic structure, wherein the support structure of the membrane, between the two surfaces thereof, has a region with flow channels of relatively constant diameter. This region typically adjoins a region of flow channels with gradually increasing or decreasing diameters.

Please amend the Abstract on page 41 as follows:

Appl. No. : 10/603,425 Filed : June 24, 2003

The present invention is directed to composite filters and methods for preparing same. More specifically, it is directed to filter laminates of multiple discrete discrete layers of material bonded together, with at least one of the layers being an asymmetric membrane.